STRESS-RELATED RISKS AMONG STUDENTS PREPARING FOR A CAREER IN THE POLICE

Original Scientific Article

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Abstract: The aim of this study is to examine the applicability of verified organizational and operational stress questionnaires, originally designed for police officers, to students preparing for a career in the police. The study was conducted by surveying students using adapted questionnaires, in which five questions in the organizational questionnaire and six in the professional questionnaire were modified to reflect student activities. The findings indicate the following: 1) organizational and operational stressors were ranked according to their intensity (risk), with certain exceptions identified; 2) very strong positive correlations were found between the mean values of organizational and operational stress (e.g., *Pearson correlation coefficient* for the entire sample amounts to $r = 0.989$, $p < 0.01$), suggesting that managing one type of stressor enables effective management of the other; 3) organizational stressors were found to be more intense, and therefore more risky, than operational stressors; 4) female students were exposed to more intense stress than male students, and 5) both questionnaires demonstrated very high reliability (*Cronbach's Alpha coefficient*: organizational ($\alpha = 0.933$) and operational ($\alpha = 0.900$).

Keywords: organizational and operational stressors, student activities, students, questionnaires, police officers, risks

INTRODUCTION

Research problem

Training and education for police work must be as closely aligned as possible with the professional needs of the police. In addition to professional competencies, such forms of police education also include organizational knowledge, which encompasses police professional culture (Constable & Smith, 2015). With these foundations in mind, the educational model was established at the Uni-

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versity of Criminal Investigation and Police Studies in Belgrade, Republic of Serbia (UCIPS).

In cooperation with the Ministry of the Interior of the Republic of Serbia (MoI RS), in 2019, the UCIPS renewed the system that existed at the Police Academy (the legal predecessor of the UCIPS) until 2006, which ensured a high level of structured education for the profession of policing. This means that the model of police education has been restored so that an undergraduate student (in criminalistics, information technologies and computing, or forensics) signs a contract on mutual rights and obligations with the MoI RS, which provides institutional support to the UCIPS. According to this contract, students receive a scholarship from the MoI RS (which includes food, accommodation, uniforms, equipment, weapons, textbooks, consumables, and other learning necessities, followed by employment with a higher education qualification in the MoI RS upon graduation), while students are obligated to complete their studies within five academic years from enrollment at the UCIPS (Криминалистичко-полицијски универзитет, 2023).

However, every coin has two sides, and in this case the reverse side consists of stressors. These two aspects—motivation and stress—form two sides of the same coin, representing the entirety of police education.

The motivational mechanisms and stressors experienced by UCIPS students manifest through the study, living, and working regime at the University. In undergraduate academic studies, this regime lasts four academic years divided into eight semesters. Each academic year includes six examination periods (a total of 24 over four years), during which students must pass around 40 courses (depending on the study program they attend). A crucial part of the curriculum consists of various types of practical training (important from the perspective of professional stressors, including informational and professional visits to police stations and other organizational units of the Police Directorate, field training, firearms handling training, live-fire exercises, attending crime scene investigations, autopsies, and more). These practical sessions are graded and form a mandatory component of the study program (Криминалистичко-полицијски универзитет, 2021).

The daily life and work of UCIPS students are organized through a structured daily schedule. This schedule prescribes activities from waking up until lights-out (mandatory nighttime rest). Throughout the day, students follow routines that include morning inspection, the inspection of the living quarters, meals, time allocated for morning and afternoon classes, an afternoon rest period, and training in operational-police skills (primarily drill and tactical training, as well as firearms handling), with free time available from dinner until lights-out. In parallel with these activities, students also carry out various official and extracurricular duties, such as shifts, participation in securing the UCIPS facility, maintaining shared rooms and common areas participation in student clubs, securing public gatherings and ceremonies, humanitarian work, and so on. All these requirements apply particularly to first-year undergraduate

students, while in later years this model of life and work is applied to a lesser extent, assuming that senior students have already developed a degree of competence.

The implementation of the daily schedule is overseen by mentors employed at the UCIPS and by instructors from the Gendarmerie (a special-purpose organizational unit of the Police Directorate of the MoI RS) (Субошић, 2020). From them, students acquire both professional and organizational knowledge, including police professional culture. This police culture is paramilitary (uniforms and equipment, ranks, insignia, platoons, commanders, drill procedures, etc.), paternalistic (mentors and instructors are significantly older and adopt a supervisory, protective attitude), and micromanagement-oriented, as attention is paid even to small details (Goldstein, 1990; Shane, 2010). It is referred to as "command–control" (Webber, 1991: 116). The importance of such a culture is confirmed by the Police Executive Research Forum (PERF) Report, which emphasizes that police culture expresses a "command–control" approach to every situation (Police Executive Research Forum, 2016: 113). Within this culture, the most prominent lessons learned during police training are those that reinforce the paramilitary structure and ethos (Chappell & Lanza-Kaduce, 2010). Ultimately, such a culture quickly fosters a need for rules, command, and control, and a readiness to become part of or an expression of the organization itself (Кесић, 2019: 62; Кесић & Зекавица, 2019: 115). For all these reasons, this paper problematizes the applicability of questionnaires on stressors experienced by police officers to students being trained to work in policing, rather than stressors of student life in general. This distinction is necessary because the model of student life and work at the UCIPS is far closer to police work than to the general university experience (e.g., all UCIPS undergraduate students are scholarship holders of the Ministry of the Interior, which creates specificities in their status and legal position).

The organizational and professional aspects of student life and work at the UCIPS contain both motivational mechanisms (which are not addressed in this study) and stressors (which are addressed). Stressors in the profession of policing have been addressed in numerous studies. For example, Violanti et al. noted "This review includes searches of relevant databases (1990–2016), including PubMed, Scopus, Embase, ProQuest, PsycINFO, PILOTS, and Google Scholar," and 97 articles on the subject were consulted (Violanti et al., 2017). Accordingly, there are also validated questionnaires for police officers, which are divided into those designed to assess organizational stress (Police Organizational Stress Questionnaire – PSQ-Org) and those addressing operational stress (Police Operational Stress Questionnaire – PSQ-Op) (McCreary & Thompson, 2006). Such questionnaires have been validated internationally (McCreary et al., 2017; Acquadro Maran et al., 2018; Kukić et al., 2021), and for the Republic of Serbia, one such pair of questionnaires was validated in 2021 (Kukić et al., 2021).

Hypotheses

General hypothesis: "The validated questionnaires for identifying organizational and operational stressors and their intensities among police officers are applicable to the student population preparing for a career in the police."

- First specific hypothesis: "The validated questionnaires for identifying organizational stressors and their intensities among police officers are applicable to the student population preparing for a career in the police.
  - First individual hypothesis within the first specific hypothesis: "Validated questionnaires for determining organizational stressors and their intensities among police officers are applicable to male students preparing for a career in the police."
  - Second individual hypothesis within the first specific hypothesis: "Validated questionnaires for determining organizational stressors and their intensities among police officers are applicable to female students preparing for a career in the police."
- Second specific hypothesis: "Validated questionnaires for determining operational stressors and their intensities among police officers are applicable to the student population preparing for a career in the police."
  - First individual hypothesis within the second specific hypothesis: "The validated questionnaires for identifying operational stressors and their intensities among police officers are applicable to male students preparing for a career in the police."
  - Second individual hypothesis within the second specific hypothesis: "The validated questionnaires for identifying operational stressors and their intensities among police officers are applicable to female students preparing for a career in the police."

Research Objective

The purpose of this study is to examine the applicability of the verified questionnaires related to organizational and operational stress among police officers to students preparing for a career in the police, internationally and in the Republic of Serbia. The goal is to potentially extend the use of these questionnaires to the student population in question. The practical purpose is to improve stress management among students preparing for a career in the police, ensuring that their education aligns more effectively with both academic requirements and the professional needs of the police service.

Variables

The study includes independent and dependent variables. The independent variable is the students' gender (male and female). The dependent variables are

the respondents' answers on a seven-point Likert scale (ranging from 1 to 7), expressing the intensity of individual stressors categorized as organizational or operational.

METHODOLOGY

Sample

Among the 119 dents at the University of Criminal Investigation and Police Studies who participated in the survey, 67 were male and 52 were female. The composition of the surveyed students by gender, study program, and year of study is presented in the table below.

Table 1: Structure of the respondents

Study program	UAS Criminalistics		UAS Information Technology	
Year of study	1st year	2nd year	1st year	3rd year
Male	19	28	10	10
Female	23	17	3	9

Instruments

A survey was the primary method for data collection in this study. It was conducted using two validated questionnaires for police officers in the Republic of Serbia, which are designed to examine stressors and their intensity levels:

- Organizational stress: the Police Organizational Stress Questionnaire (*PSQ-Org*) – the reliability of application among police officers confirmed by a Cronbach's alpha coefficient (α) = 0.959; and
- Operational stress: the Police Operational Stress Questionnaire (*PSQ-Op*) – the reliability of application among police officers confirmed by a Cronbach's alpha coefficient (α) = 0.961. Each questionnaire contains 20 items and was developed by Kukić, Subošić, Heinrich, Greco & Koropanovski (Kukić et al., 2021).

For the purpose of applying these questionnaires to students preparing for a career in the police, some items referring to police officers were adapted, as shown in the following two tables.

Table 2: Organizational stressors in policing

For police officers (the primary validated questionnaire)	For students preparing for a career in the police (adapted questionnaire)
Feeling like you always have to prove yourself to to the organisation	Feeling like you always have to prove yourself to your colleagues
Constant changes in policy about police work and/or in legislation	Constant changes in policy about your duties and/or in legislation
Percieved pressure to volunteer your free time	You are expected to remain officially available even during your free time
Leaders over-emphasise the negatives (e.g., superviser evaluations, public complaints)	Supervisors over-emphasise the negatives (e.g. low grades, complaints from professors or non-teaching staff).
Dealing the court system	Dealing with professional services (e.g. student services, library)

As shown in the previous table, five items contained in the organizational stress questionnaire for police officers were adapted for surveying students. This was done symmetrically and minimally, so as not to change the meaning of the items. The adaptation of the items contained in the operational stress questionnaire for police officers for the purpose of surveying students is shown in the following table.

Table 3: Operational stressors in policing

For police officers (the primary validated questionnaire)	For students preparing for a career in the police (adapted questionnaire)
Risk of being injured on the job	Risk of being injured
Eating healthy at work	Eating healthy
Lack of understanding from family and friends about your work	Lack of understanding from family and friends about your studies
Making friends outside the job	Making friends outside your studies
Feeling like you are always on the job	Feeling like you are always engaged in academic tasks
Family and friends feel the effects of the stigma associated with the nature of your job	Family and friends feel the effects of the stigma associated with the nature of your studies

As is shown in the previous table, six items from the operational stress questionnaire for police officers were adapted for the purpose of surveying students. As with the organizational stress questionnaire, this was done symmetrically and minimally so as not to change the meaning of each item.

Responses to both questionnaires were given by circling a value from 1 to 7, i.e., on a seven-point Likert scale, which reflects the respondent's assessment of the intensity (and therefore the risk) of each organizational or operational stressor. The meaning of the individual response values is shown in the following table.

Table 4: The meaning of individual response values of the respondents

No stress at all	Very little stress	Little stress	Moderate stress	Quite a bit of stress	High stress	Extreme stress
1	2	3	4	5	6	7

By adapting the items in both questionnaires, while keeping the remaining items and the scale shown in the previous table unchanged, questionnaires were created to investigate organizational and operational stress among students preparing for a career in the police. The full questionnaires are not presented due to space limitations; only sample items are provided. An example of a question in the organizational stress questionnaire is shown in the following table.

Table 5: Example of a question in the Organizational Stress Questionnaire

Unequal sharing of work responsibilities	1	2	3	4	5	6	7

Table 6: Example of a question in the Operational Stress Questionnaire

Shift work	1	2	3	4	5	6	7

Testing procedure

A total of 119 male and female students at the UCIPS responded to the questions in both questionnaires. The sample consisted of first-year and second-year students enrolled in the Undergraduate Academic Studies in Criminalistics (UASC) and first-year and third-year students enrolled in the Undergraduate Academic Studies in Information Technology and Computing (UASITC). The sample was randomly formed and consisted of those students who took exams in two courses in the September examination period in 2021, at the UCIPS. Respondents provided their responses anonymously, voluntarily, individually, and all at the same time, while experiencing pre-exam anxiety. Stress experienced by students prior, during, and after the exams does not only negatively affect academic performance but can also have long-term consequences on physical and mental health, such as dropping out of studies, decreased self-esteem, and underutilized intellectual potential (Dukić & Golubović, 2021: 15).

Data processing

The data obtained from the student survey were processed to form a database in Microsoft Excel, which was subsequently imported into the IBM SPSS

(v.19) software package program. The analysis of the data processed was conducted using descriptive statistics (AM = arithmetic mean, SD = standard deviation, Min. = minimum response value, and Max. = maximum response value), including statistical analysis methods: the bivariate Pearson correlation and an independent samples t-test. The Pearson correlation was applied because the distribution of mean response values for the items related to the intensity (risk) of stressors was normal according to the Shapiro–Wilk test. The independent samples t-test was used to identify exceptions in the prioritization of stressors by intensity (risk) between male and female respondents. The results obtained are presented in tabular format. Cronbach's alpha coefficient (α) was used to assess the reliability of both questionnaires.

FINDINGS

Arithmetic means and other response values related to organizational and operational stress (student activities) in the overall sample are presented in the following two tables.

Table 7: Ranked list of organizational stressors in the overall sample

No.	Organizational stress	N	Min.	Max.	AM	SD
1.	You are expected to remain officially available even during your free time	119	1	7	4.79	1.999
2.	Constant changes in policy about your duties and/or in legislation	118	1	7	4.64	1.994
3.	Unequal sharing of work responsibilities	118	1	7	4.57	1.985
4.	The feeling that different rules apply to different people (e.g. favouritism)	119	1	7	4.52	2.170
5.	Excessive administrative duties	119	1	7	4.08	1.955
6.	Inconsistent leadership style	118	1	7	4.03	1.972
7.	Bureaucratic red tape	119	1	7	3.97	1.915
8.	Inadequate equipment	119	1	7	3.81	2.005
9.	Lack of resources	118	1	7	3.77	2.061
10.	Staff shortages	119	1	7	3.48	2.154
11.	Supervisors over-emphasise the negatives (e.g., low grades, complaints from professors or non-teaching staff)	119	1	7	3.48	2.154
12.	Lack of training on new equipment	118	1	7	3.22	2.064
13.	If you are sick or injured your colleagues seem to look down on you	116	1	7	3.10	2.251
14.	The need to be accountable for doing your job	119	1	7	3.08	2.018
15.	Dealing with supervisors	118	1	7	2.99	1.928
16.	Dealing with professional services (e.g., student services, library)	119	1	7	2.75	2.043

No.	Organizational stress	N	Min.	Max.	AM	SD
17.	Internal investigations	117	1	7	2.71	1.952
18.	Dealing with colleagues	119	1	7	2.59	1.597
19.	Feeling like you always have to prove yourself to your colleagues	118	1	7	2.37	1.843
20.	Too much computer work	118	1	7	2.35	1.770

The ranked list presented above, as well as the one that follows, was derived by arranging the stressors in descending order according to the intensity of risk with which each stressor manifests. The distribution of AM of the respondents' responses to the items related to organizational stressors in the overall sample is normal according to the Shapiro–Wilk test (Statistic = 0.950, *df* = 20, *Sig*. = 0.360). This finding is important for selecting an appropriate statistical analysis method to quantify the relationship between organizational and operational stress, both in the overall sample and the subsamples by gender.

Table 8: Ranked list of operational stressors (student activities) in the overall sample

No.	Operational stress (student activities)	N	Min.	Max.	AM	SD
1.	Not enough time available to spend with friends and family	119	1	7	4.95	1.948
2.	Fatigue (e.g. shift work, over-time)	117	1	7	4.92	1.876
3.	Work related activities on days off	117	1	7	4.82	1.946
4.	Study-related ctivities on days off	119	1	7	4.70	2.141
5.	Feeling like you are always engaged in academic tasks	119	1	7	4.15	2.216
6.	Working alone at night	119	1	7	4.03	2.147
7.	Occupation-related health issues (e.g. back pain)	115	1	7	3.79	2.002
8.	Lack of understanding from family and friends about your studies	119	1	7	3.63	2.389
9.	Managing your social life	119	1	7	3.52	2.127
10.	Traumatic events (e.g. injury)	118	1	7	3.49	1.956
11.	Limitations to your social life (e.g. who your friends are, where you socialize)	119	1	7	3.49	2.186
12.	Shift work	118	1	7	3.44	1.786
13.	Paperwork	117	1	7	3.04	1.729
14.	Finding time to stay in good physical condition	116	1	7	2.91	1.954
15.	Risk of being injured	117	1	7	2.75	1.790
16.	Eating healthy	119	1	7	2.75	2.009
17.	Friends and family feel the effects of the stigma associated with your studies	119	1	7	2.42	1.924
18.	Upholding a higher image in public	118	1	7	2.30	1.655
19.	Negative comments from the public	117	1	7	2.15	1.664
20.	Making friends outside your studies	118	1	7	2.15	1.688

The distribution of AM of the respondents' responses to the items related to operational stressors in the overall sample is also normal according to the Shapiro–Wilk test (Statistic = 0.938, *df* = 20, *Sig.* = 0.221). This is followed by determining the arithmetic means of the respondents' responses related to organizational and operational stress in the overall sample (see Table 9).

Table 9: Arithmetic mean of respondents' responses related to organizational stress and operational stress (student activities) in the overall sample

	N	AM	SD
Organizational stress	119	3.51	0.77
Operational stress (student activities)	119	3.47	0.91

Since both distributions (related to organizational and operational stress) are normal, a parametric method can be applied, specifically the Pearson correlation coefficient. The correlation on the overall sample between organizational and operational stress (student activities) is $r = 0.989$, $p < 0.01$. What follows is the presentation of the arithmetic means of respondents' responses related to organizational and operational stress (student activities) in the male subsample (see Tables 10 and 11).

Table 10: Ranked list of organizational stressors in the male subsample

No.	Organizational stress	N	Min.	Max.	AM	SD
1.	You are expected to remain officially available even during your free time	67	1	7	4.67	2.149
2.	Constant changes in policy about your duties and/or in legislation	67	1	7	4.34	1.951
3.	Unequal sharing of work responsibilities	66	1	7	4.33	1.979
4.	The feeling that different rules apply to different people (e.g. favouritism)	67	1	7	4.27	2.300
5.	Inconsistent leadership style	67	1	7	3.84	2.005
6.	Bureaucratic red tape	67	1	7	3.82	1.874
7.	Excessive administrative duties	67	1	7	3.76	1.801
8.	Lack of resources	67	1	7	3.76	2.053
9.	Inadequate equipment	67	1	7	3.63	2.029
10.	Supervisors over-emphasise the negatives (e.g. low grades, complaints from professors or non-teaching staff).	67	1	7	3.39	2.139
11.	Staff shortages	67	1	7	3.30	2.045
12.	Lack of training on new equipment	67	1	7	3.01	1.887
13.	If you are sick or injured your colleagues seem to look down on you	66	1	7	2.88	2.087

No.	Organizational stress	N	Min.	Max.	AM	SD
14.	Dealing with supervisors	67	1	7	2.82	1.898
15.	The need to be accountable for doing your job	67	1	7	2.67	1.709
16.	Dealing with professional services (e.g. student services, library)	67	1	7	2.52	1.949
17.	Internal investigations	66	1	7	2.52	1.875
18.	Dealing with colleagues	67	1	7	2.46	1.570
19.	Too much computer work	67	1	7	2.21	1.619
20.	Feeling like you always have to prove yourself to your colleagues	67	1	7	2.15	1.645

The distribution of AM of the male respondents' responses regarding organizational stressors is normal according to the Shapiro-Wilk test (Statistic = 0.947, *df* = 20, *Sig*. = 0.326). The Pearson correlation between the AS of the overall sample and the male subsample regarding organizational stress is r = 0.996, p< 0.01. This verifies the first individual hypothesis of the first specific hypothesis: "The validated questionnaires for identifying organizational stressors and their intensities for police officers are applicable to male students preparing for a career in the police." This is followed by the ranked list of professional stressors (student activities) in the male subsample.

Table 11: Ranked list of operational stressors (student activities) in the male subsample

No.	Student activities	N	Min.	Max.	AM	SD
1.	Not enough time available to spend with friends and family	67	1	7	4.58	2.104
2.	Fatigue (e.g. shift work, over-time)	65	1	7	4.45	1.888
3.	Over-time demands	66	1	7	4.42	2.031
4.	Study-related activities on days off	67	1	7	4.39	2.208
5.	Feeling like you are always engaged in academic tasks	67	1	7	3.87	2.229
6.	Working alone at night	67	1	7	3.75	2.163
7.	Occupation-related health issues (e.g. back pain)	64	1	7	3.50	1.877
8.	Lack of understanding from family and friends about your studies	67	1	7	3.42	2.381
9.	Traumatic events (e.g. injury)	67	1	7	3.31	1.948
10.	Limitations to your social life (e.g. who your friends are, where you socialize)	67	1	7	3.28	2.207
11.	Managing your social life	67	1	7	3.09	1.929
12.	Paperwork	65	1	7	3.03	1.658
13.	Shift work	66	1	7	2.91	1.526
14.	Finding time to stay in good physical condition	64	1	7	2.84	1.962
15.	Risk of being injured	65	1	7	2.69	1.785

No.	Student activities	N	Min.	Max.	AM	SD
16.	Eating healthy	67	1	7	2.66	1.887
17.	Upholding a higher image in public	66	1	7	2.52	1.730
18.	Negative comments from the public	65	1	7	2.32	1.669
19.	Friends and family feel the effects of the stigma associated with your studies	67	1	7	2.25	1.878
20.	Making friends outside your studies	67	1	7	2.15	1.672

The distribution of the AM of the male respondents' responses related to professional stressors is normal according to the Shapiro–Wilk test (Statistic = 0.940, *df* = 20, Sig. = 0.238). The Pearson correlation between the AM of the averall sample and the male subsample regarding professional stress is $r = 0.994$, $p < 0.01$. This verifies the first individual hypothesis of the second specific hypothesis: "The validated questionnaires for identifying operational stressors and their intensities among police officers are applicable to male students preparing for a career in the police." This is followed by a comparison of the arithmetic means of organizational stress and student activities in the male subsample.

Table 12: Arithmetic mean of organizational stress and student activities in the male subsample

	N	AM	SD
Organizational stress	67	3.32	0.77
Operational stress (student activities)	67	3.27	0.76

What follows is the presentation of the ranked lists of organizational and operational stressors (student activities) in the female subsample (see Tables 13 and 14).

Табела 13: Ranked list of organizational stressors in the female subsample

No.	Organizational stress	N	Min.	Max.	AM	SD
1.	Constant changes in policy about your duties and/or in legislation	51	1	7	5.04	2.000
2.	You are expected to remain officially available even during your free time	52	1	7	4.94	1.798
3.	Unequal sharing of responsibilities	52	1	7	4.87	1.971
4.	The feeling that different rules apply to different people (e.g. favouritism)	52	1	7	4.85	1.964
5.	Excessive administrative duties	52	1	7	4.50	2.082
6.	Inconsistent leadership style	51	1	7	4.27	1.919
7.	Bureaucratic red tape	52	1	7	4.17	1.968

No.	Organizational stress	N	Min.	Max.	AM	SD
8.	Inadequate equipment	52	1	7	4.04	1.970
9.	Lack of resources	51	1	7	3.78	2.091
10.	Staff shortages	52	1	7	3.71	2.287
11.	The need to be accountable for doing your job	52	1	7	3.60	2.269
12.	Supervisors over-emphasise the negatives (e.g., low grades, complaints from professors or non-teaching staff)	52	1	7	3.60	2.190
13.	Lack of training on new equipment	51	1	7	3.49	2.266
14.	If you are sick or injured your colleagues seem to look down on you	50	1	7	3.40	2.441
15.	Dealing with supervisers	51	1	7	3.22	1.963
16.	Dealing with professional services (e.g. student services, library)	52	1	7	3.04	2.142
17.	Internal investigations	51	1	7	2.96	2.039
18.	Dealing with colleagues	52	1	7	2.75	1.631
19.	Feeling like you always have to prove yourself to your colleagues	51	1	7	2.67	2.056
20.	Too much computer work	51	1	7	2.53	1.953

The distribution of AM of the female respondents across the items related to organizational stressors is normal according to the Shapiro–Wilk test (Statistic = 0.950, $df = 20$, $Sig. = 0.372$). The Pearson correlation between the AS of the overall sample and the female subsample regarding organizational stress is $r = 0.993$, $p < 0.01$. This verifies the second individual hypothesis of the first specific hypothesis: "The validated questionnaires for identifying organizational stressors and their intensity among police officers are applicable to the female students preparing for a career in the police." This is followed by the ranked list of operational stressors (student activities) in the female subsample.

Table 14: Ranked list of operational stressors (student activities) in the female subsample

No.	Student activities	N	Min.	Max.	AM	SD
1.	Fatigue (e.g. shift work, over-time)	52	1	7	5.52	1.698
2.	Not enough time available to spend with friends and family	52	1	7	5.42	1.625
3.	Over-time demands	51	1	7	5.33	1.717
4.	Study-related activities on your days off	52	1	7	5.10	2.003
5.	Feeling like you are always engaged in academic tasks	52	1	7	4.52	2.165
6.	Working alone at night	52	1	7	4.40	2.089
7.	Occupation-related health issues (e.g. back pain)	51	1	7	4.16	2.111
8.	Shift work	52	1	7	4.12	1.875

No.	Student activities	N	Min.	Max.	AM	SD
9.	Managing your social life	52	1	7	4.08	2.257
10.	Lack of understanding from family and friends about your studies	52	1	7	3.90	2.395
11.	Limitations to your social life (e.g. who your friends are, where you socialize)	52	1	7	3.75	2.150
12.	Traumatic events (e.g. injury)	51	1	7	3.73	1.960
13.	Paperwork	52	1	7	3.06	1.830
14.	Finding time to stay in good physical condition	52	1	7	3.00	1.960
15.	Eating healty	52	1	7	2.87	2.170
16.	Risk of being injured	52	1	7	2.83	1.812
17.	Friends and family feel the effects of the stigma associated with your studies	52	1	7	2.63	1.981
18.	Making friends outside your studies	51	1	7	2.16	1.725
19.	Upholding a higher image in public	52	1	7	2.02	1.527
20.	Negative comments from the public	52	1	7	1.94	1.650

The distribution of the AM of the respondents' responses across items related to operational stressors in the female subsample is normal according to the Shapiro–Wilk test (*Statistic* = 0.950, *df* = 20, *Sig*. = 0.362). The Pearson correlation between the AM of the overall sample and the female subsample regarding operational stress is $r = 0.994$, $p < 0.01$. This verifies the second individual hypothesis of the second specific hypothesis: "The validated questionnaires for identifying operational stressors and their intensities among police officers are applicable to female students preparing for a career in the police." What follows is a comparison of the relationship between organizational stress and student activities in the female subsample.

Table 15: Relationship between organizational stress and student activities in the female subsample

	N	AM	SD
Organizational stress	52	3.77	0.79
Student activities	52	3.72	1.13

The next section presents the arithmetic mean of the resondents' responses related to organizational and operational stress among male and female students.

Table 16: Arithmetic mean of respondents' responses related to organizational stress in the male and female samples

	Gender	AM	SD
Organizational stress among students	Males	3.32	0.77
	Females	3.77	0.79

Regarding the respondents' responses related the organizational stress items, it can be observed that such stressors have a stronger impact on female students than on male students. Although the prioritization of organizational stressors is almost identical for both groups, a greater difference is noted for the stressor "The need to be accountable for doing your job", which was the 11th-ranked item for female students (AM=3.60) and the 15th-ranked item for male students (AM=2.67). A statistically significant difference between the responses of male and female students to this item was identified ($t > 1.96$, $p < 0.05$), which was determined by the independent samples t-test and presented in the following table.

Table 17: Results of the independent samples t-test for the stressor – The need to be accountable for doing your job

Organizational stress	Gender	N	AM	SD	t	p
The need to be accountable for doing your job	M	67	2.67	1.71	-2.448	0.016
	F	52	3.60	2.27		

Table 18: Arithmetic mean of respondents' responses related to operational stress (student activities) in the male and female samples

	Gender	AM	SD
Stress among students due to different aspects of student life	Males	3.27	0.76
	Females	3.73	1.13

Regarding the respondents' responses related to operational stress items, (*whis is understood as student activities*), it can be observed that these stressors, like organizational ones, have a stronger impact on female students than on male students. Although the prioritization of operational stressors among female and male students is almost identical, a larger difference is observed for the stressor "Shift work", which is the 8th ranked item for female students (AM=4.12) and the13th ranked item for male students (AM=2.91). This means that female students cope with shift work more poorly than male students (e.g., during on-call duties or securing the University facilities). A statistically sig-

nificant difference in responses for this item was identified ($t > 1.96$, $p < 0.05$), which was determined by the independent samples t-test and is presented in the following table.

Table 19: Results of the independent samples t-test for the stressor – Shift work

Student activities	Gender	N	AM	SD	t	p
Shift work	M	66	2.91	1.53	-3.853	0.000
	F	52	4.12	1.88		

By verifying the first and second individual hypotheses of both specific hypotheses, the specific hypotheses have been verified, namely:

- The first specific hypothesis: "The validated questionnaires for identifying organizational stressors and their intensities among police officers are applicable to the student population preparing for a career in the police."
- Second specific hypothesis: "The validated questionnaires for identifying operational stressors and their intensities among police officers are applicable to the student population preparing for a career in the police."

Finally, the issue of the reliability of the applied questionnaires arises. The reliability of both questionnaires was confirmed using Cronbach's alpha (α), which in this study demonstrated the following values:

- Organizational Stress Questionnaire (*PSQ-Org*): $\alpha = 0.933$ and
- Operational Stress Questionnaire (*PSQ-Op*): $\alpha = 0.900$ (understood as student activities)

Given the previously verified specific hypotheses and the very high reliability of both questionnaires, which were originally developed for police officers but applied here to students preparing for a career in the police, the general hypothesis was also confirmed: "The validated questionnaires for identifying organizational and operational stressors and their intensities among police officers are applicable to the student population preparing for a career in the police."

DISCUSSION

The prioritization of organizational stressors in the overall sample, as well as in the subsamples of male and female students, is nearly identical, which is is evident from the ranked lists of organizational stressors. A more pronounced difference is observed for the stressor "The need to be accountable for doing

your jod," which may indicate a higher level of responsibility among female students toward their professional obligations compared to male students.

The prioritization of operational stressors in the overall sample, as well as in the subsamples of male and female students, is also nearly identical, which is evident from the ranked lists of operational stressors. A more pronounced difference is observed for the stressor "Shift work," which aligns with the findings of a study involving 410 police officers, 50% of whom were women, which indicated that men are more tolerant of shift work than women (Saksvik-Lehouillier & Sørengaard, 2023).

The arithmetic means of the respondents' responses related to organizational stress (AM=3.51) and operational stress (AM=3.47) in the toverall sample indicate that organizational stress is slightly more intense than operational stress. In the male subsample, the arithmetic mean of organizational stress (AM=3.32) and student activities (AM=3.27) suggests that male students are somewhat more exposed to organizational than operational stress. Female students are similarly slightly more exposed to organizational stress (AM=3.77) than operational stress (AM=3.73). This finding aligns with research conducted in Croatia (Glavina et al., 2015), which emphasizes a significant difference between these stressors in favor of organizational stress, particularly in relation to police officers. The difference, which in this regard is not significant among the student population under consideration, suggests that stressors are more homogeneous for students compared to those experienced by police officers.

A very high correlation between organizational and operational stress ($r = 0.989$, $p < 0.01$) indicates that higher organizational stress is associated with higher stress from student activities, and vice versa. This also suggests that influencing one type of stressor can affect the other, which means that if the responsible authorities wanted to reduce stress levels among students (e.g., for educational purposes), it would be sufficient to intervene on just one type of stressor, such as organizational stressors, which would consequently reduce stress related to student activities, and vice versa. Conversely, if the authorities wanted to increase stress levels among students to better prepare them for the risks associated with the policing profession, increasing the intensity of operational stressors would simultaneously elevate exposure to organizational stressors.

The reliability of these results regarding the correlation between organizational and operational stress across the overall sample was confirmed by correlating the same stressors within the male (organizational stress: $r = 0.996$, $p < 0.01$; operational stress: $r = 0.994$, $p < 0.01$) and female (organizational stress: $r = 0.993$, $p < 0.01$; operational stress: r = 0.994, $p < 0.01$) subsamples. These findings are consistent and noncontradictory.

The findings of this study also indicate that women are, on average, more exposed to both organizational (AM = 3.32 and AM = 3.77) and operational (AM = 3.27 and AM = 3.72) stress than men. This difference can be interpreted within the context of police subculture, which students internalize during

their education at the University of Criminal Investigation and Police Studies. The policing profession, and, by extension, its subculture, tends to favor male attributes, as it predominantly relies on characteristics traditionally associated with men, the so-called "male competence domain" (Barrie & Broomhall, 2012). As a result, women may find it more challenging than men to adapt to such an organizational environment. This does not suggest that women should not work in policing; rather, it underscores the necessity of identifying appropriate positions for female police officers, where qualities more commonly associated with women (e.g. empathy) are particularly valuable. The framework for such placement is supported by the concept of *Community Policing* (Miller, 1999).

Finally, based on the values of Cronbach's Alpha coefficient (organizational stress – *PSQ-Org*: $\alpha = 0.933$; operational stress – *PSQ-Op*: $\alpha = 0.900$), the reliability and applicability of the adapted questionnaires are confirmed. These reliability levels are slightly lower than those reported in studies involving active police officers, organizational stress (*PSQ-Org*): $\alpha = 0.959$ and professional stress (*PSQ-Op*): $\alpha = 0.961$ (Kukić et al., 2021), which may be explained by their application to students preparing for a career in the police and by the adaptations made to tailor the instruments to this population.

CONCLUSION

The conclusions reached in this study are as follows:

- The individual and specific hypotheses were verified, thereby confirming the general hypothesis: "The validated questionnaires for identifying organizational and operational stressors and their intensities among police officers are applicable to the student population preparing for a career in the police";
- Ranked lists of organizational and operational stressors by intensity (risk) were established for the pverall sample, as well as for the male and female subsamples. These lists are highly similar, with several notable exceptions;
- Organizational stressors are more intensive and therefore more risky than operational stressors;
- There is a very high positive correlation between organizational and operational stress, which enables the management of one type of stressor through the other and vice verse;
- Female students are exposed to more intensive stress than male students (in the context of the policing profession and the training and preparation provided at the University of Criminal Investigation and Police Studies, which may be explained by the greater desirability of traits traditionally associated with masculinity, which are regarded as necessary for addressing security-related challenges that define police work.

Consequently, male students adapt more easily, whereas female students encounter greater difficulty meeting these professional demands);

- Both questionnaires, although adapted, demonstrated high reliability.
- Since student stress is measurable using these questionnaires, it is also manageable;
- The high correlation between organizational and operational stressors enables student stress to be managed in the following ways:
  - If it is in the interest of decision-makers to modify stress levels, then influencing organizational stress can produce corresponding changes in operational stress, and vice versa;
  - Stress intensity can be increased or decreased depending on educational goals or the need to enhance student preparedness for the policing profession.
- The applied questionnaires (*PSQ-Org* and *PSQ-Op*) are reliable for students preparing for a career in the police, although their reliability is slightly lower compared to those intented for active police officers;
- It is possible to continue using the questionnaires employed in this study, ideally with a stratified sample (including forensic science students), where an increase in reliability may be expected.
- The questionnaires may be further refined and subsequently tested using a random sample.
- Future research on this topic may examine student responses by study program and year of study, rather than by sex alone, as it has been done in the present study.

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